THE BULLETIN OF SYMBOLIC LOGIC

Edited by

James Cummings, *Managing Editor*
Guram Bezhanishvili
Katalin Bimbó
Peter Dybjer
Ali Enayat
Salma Kuhlmann
Øystein Linnebo
Arno Pauly

Reviews Editors

Graham Leach-Krouse, *Managing Editor for Reviews*
Albert Atserias
Mark van Atten
Clinton Conley
Johanna Franklin
Dugald Macpherson
Antonio Montalbán
Valeria de Paiva
Christian Retoré
Marion Scheepers
Nam Trang

Thesis Abstracts Editor

Sandra Müller

VOLUME 29 • NUMBER 4 • DECEMBER 2023 • ISSN 1079-8986

Copyright © 2024 by the Association for Symbolic Logic. All rights reserved.
Reproduction by photostat, photo-print, microfilm, or like process by permission only.

PUBLISHED BY CAMBRIDGE UNIVERSITY PRESS & ASSESSMENT FOR AND ON BEHALF OF THE ASSOCIATION OF SYMBOLIC LOGIC.

https://doi.org/10.1017/bsl.2023.43 Published online by Cambridge University Press

The BULLETIN, the JOURNAL and the REVIEW OF SYMBOLIC LOGIC are the official organs of the Association for Symbolic Logic, an international organization for furthering research in logic and the exchange of ideas among mathematicians, computer scientists, linguists, and others interested in this field. The BULLETIN encourages submissions of *Articles* and *Communications* in all areas of logic, including mathematical or philosophical logic, logic in computer science or linguistics, the history or philosophy of logic, and applications of logic to other fields. It also encourages the submissions of abstracts for doctoral level theses in logic.The BULLETIN also publishes reviews of publications in logic.

Editors
James Cummings (Managing Editor), Department of Mathematical Sciences, Carnegie Mellon University, Wean Hall 6113, Pittsburgh, PA 15213, USA
jcumming@andrew.cmu.edu
Guram Bezhanishvili, New Mexico State University, New Mexico, USA
guram@nmsu.edu
Katalin Bimbó, University of Alberta, Alberta, Canada
bimbo@ualberta.ca
Peter Dybjer, Department of Computer Science and Engineering, Chalmers University of Technology, SE 412 96 Göteborg, Sweden
peterd@chalmers.se
Ali Enayat, Department of Philosophy, Linguistics, and Theory of Science, University of Gothenburg, Box 200, SE 405 30, Gothenburg, Sweden
ali.enayat@gu.se
Salma Kuhlmann, Fachbereich Matematik und Statistik, Universität Konstanz, Konstanz 78457, Germany
salma.kuhlmann@uni-konstanz.de
Øystein Linnebo, Department of Philosophy, IFIKK, 0315 Oslo, Norway
oystein.linnebo@ifikk.uio.no
Arno Pauly, Swansea University, Wales
arno.m.pauly@gmail.com

Reviews editors
Graham Leach-Krouse (Managing Editor), Kansas State University, Kansas, USA, gleachkr@ksu.edu
Albert Atserias atserias@cs.upc.edu,
Mark van Atten mark.vanatten@univ-paris1.fr,
Clinton Conley clintonc@andrew.cmu.edu,
Johanna Franklin johanna.n.franklin@hofstra.edu,
Dugald Macpherson pmthdm@maths.leeds.ac.uk,
Antonio Montalbán antonio@math.berkeley.edu,
Valeria de Paiva valeria.depaiva@gmail.com,
Christian Retoré christian.retore@lirmm.fr,
Marion Scheepers mscheepe@boisestate.edu, and
Nam Trang namtrang35@gmail.com.

Thesis abstracts editor
Sandra Müller sandra.mueller@tuwien.ac.at

Articles present topics of broad interest in a way that is accessible to a large audience. They can be purely expository, survey, or historical articles or they may contain, in addition, new ideas or results or new approaches to old ones.

Communications should be announcements of important new results and ideas in any aspect of logic; they may be short papers in their final form or preliminary announcements (extended abstracts, position papers) of longer, full papers that will be published elsewhere. In any case, they should include, in addition to a description of the new results or ideas, enough history, background, and explanation to make the significance of the work apparent to a wide audience. *Communications* will be quickly refereed and published within six months of the submission of final version.

To submit *Articles* or *Communications* please follow the procedure described at https://aslonline.org/journals/the-bulletin-of-symbolic-logic/the-bulletin-of-symbolic-logic-submission-guidelines.

To submit *Thesis Abstracts* please follow the procedure described at https://aslonline.org/journals/the-bulletin-of-symbolic-logic/logic-thesis-abstracts-in-the-bulletin-of-symbolic-logic.

Books for review in the BULLETIN should be sent to **ASL, Department of Mathematics, University of Connecticut, 341 Mansfield Road, U-1009, Storrs, CT 06269-1009, USA.**

https://doi.org/10.1017/bsl.2023.43 Published online by Cambridge University Press

TABLE OF CONTENTS

ARTICLES

Tree theory: Interpretability between weak first-order theories of trees
by ZLATAN DAMNJANOVIC 465

Interleaving logic and counting
by JOHAN VAN BENTHEM AND THOMAS ICARD 503

Asymmetric cut and choose games
by CHRISTOPHER HENNEY-TURNER, PETER HOLY, PHILIPP SCHLICHT AND PHILIP WELCH 588

A topological approach to undefinability in algebraic extensions of $\mathbb{Q}$
by KIRSTEN EISENTRÄGER, RUSSELL MILLER, CALEB SPRINGER AND LINDA WESTRICK 626

REVIEWS

John Steel and Hugh Woodin, *HOD as a Core Model*
Reviewed by Derek Levinson 656

Bruce M. Kapron, ed. Logic, Automata and Computational Complexity: The Works of Stephen A. Cook.
Reviewed by Pavel Pudlák 657

D. D. Dzhafarov and C. Mummert, *Reverse Mathematics: Problems, Reductions, and Proofs*
Reviewed by Chris J. Conidis 660

THESIS ABSTRACTS

James Holland, *Weak Indestructibility and Reflection*, Rutgers University, New Brunswick, NJ, USA, 2023. Supervised by Grigor Sargsyan 663

Teerawat Thewmorakot, *Computability Theory on Polish Metric Spaces*, University of Connecticut, Storrs, CT, USA, 2023. Supervised by David Reed Solomon 664

Waseet Kazmi, *Ordered Groups, Computability and Cantor-Bendixson Rank*, University of Connecticut, Storrs, CT, USA, 2023. Supervised by David Reed Solomon 664

Daniel Mourad. *Computability Theory: Constructive Applications of the Lefthanded Local Lemma and Characterizations of Some Classes of Cohesive Powers*. Department of Mathematics, University of Connecticut, Storrs, CT, USA. 2023. Supervised by David Reed Solomon 664

MEETING REPORTS

2023 Winter Meeting of the Association for Symbolic Logic 666

2023 North American Annual Meeting of the Association for Symbolic Logic 672

https://doi.org/10.1017/bsl.2023.43 Published online by Cambridge University Press

2023 Spring Meeting of the Association for Symbolic Logic..... 696
The 19th Latin American Symposium on Mathematical Logic of the Association for Symbolic Logic XIX Simposio LatinoAmericano de Lógica Matemática 703
28th Workshop on logic, Language, Information and Computation (WoLLIC 2021) co-sponsored by the Association for Symbolic Logic 725
NOTICES..... 726

https://doi.org/10.1017/bsl.2023.43 Published online by Cambridge University Press